

CLAIMS LISTING

1. (Previously presented) A memory module indicator device having an indicator circuit
5 using an indicator element to indicate situation of access to readable and writable
semiconductor memory mounted on a standardized memory module connected to a
computer,
the indicator element is provided corresponding to a type of access to the
semiconductor memory;
10 the indicator circuit uses the indicator element corresponding to the access type to
indicate frequency of the type of access to the semiconductor memory; and
wherein the indicator circuit counts the number of accesses to the semiconductor
memory for the access type during a specified period and uses the indicator element
corresponding to the access type to provide an indication corresponding to the number of
15 counted accesses.
2. (Original) The memory module indicator device according to claim 1, wherein the
indicator circuit uses the indicator element corresponding to the access type to indicate
frequency of the type of access to the semiconductor memory and holds an indication
20 corresponding to the maximum frequency of the access.
3. (Original) The memory module indicator device according to claim 1, wherein the
computer is mounted with a general-purpose motherboard connector and the memory
module is mounted with a memory module connection terminal connectable to the
25 motherboard connector; wherein the memory module indicator device is provided with a
connection terminal having the same shape as the memory module connection terminal
and is provided with a connector having the same shape as the motherboard connector;
and wherein the indicator circuit uses the indicator element corresponding to the access
type to indicate frequency of the type of access to the semiconductor memory when the

connection terminal is connected to the motherboard connector and the memory module connection terminal is connected to the connector.

4. (Canceled)

5

5. (Previously presented) The memory module indicator device according to claim 1, wherein there is provided a plurality of the indicator elements for each of the access types; wherein the indicator circuit turns on indicator elements corresponding to the access type; and wherein the number of the indicator elements corresponds to the number of counted accesses.

10

6. (Previously presented) The memory module indicator device according to claim 1, wherein the indicator circuit comprises a common counter circuit to count the number of accesses independently of the access types; wherein the indicator circuit receives a specified clock signal and generates a count signal whose state accordingly varies with the access type for each period corresponding to the specified period; and wherein, during the specified period, the indicator circuit uses the common counter circuit to count the number of accesses of the type corresponding to a state of the count signal and, after termination of the specified period, uses the indicator element corresponding to the access type to perform indication corresponding to the number of counted accesses.

15

20

7. (Original) The memory module indicator device according to claim 5, wherein the access type comprise writing to the semiconductor memory and reading from the semiconductor memory; wherein the memory module accesses the semiconductor memory in synchronization with a pulse clock signal input from the computer, receives a select signal indicative of a selection state of the semiconductor memory from the computer, and accesses the semiconductor memory correspondingly to the state of a write enable signal which is input from the computer to indicate whether or not to enable writing; wherein the indicator circuit comprises: a common counter circuit to count the

25

number of accesses independently of the access types; and a counting divider circuit to divide the clock signal and to generate a count division signal which changes alternately between a write count state and a read count state during each period corresponding to the specified period, wherein, when the count division signal shows a write count state and the write enable signal is set to enable writing during the specified period, the
5 indicator circuit uses the common counter circuit to count the number of times to input the select signal indicative of a selection state from the computer and, after termination of the specified period, activates as many indicator elements for writing as the number of counted accesses; and wherein, when the count division signal shows a read count state
10 and the write enable signal is set to disable writing during the specified period, the indicator circuit uses the common counter circuit to count the number of times to input the select signal indicative of a selection state from the computer and, after termination of the specified period, activates as many indicator elements for reading as the number of counted accesses.

15

8. (Canceled)

9. (Canceled)

20 10. (Canceled)

11. (Canceled)

12. (Previously Presented) The memory module indicator device according to claim 1,
25 wherein each of the indicator elements represents a specified number of accesses;
wherein the indicator circuit comprises:
a counter circuit which counts the number of accesses to the semiconductor
memory during a specified period; and

a counting divider circuit which divides specified clock signals and generates a count division signal which changes alternately between a write count state and a read count state, each period corresponds to the specified period,

wherein, the indicator circuit uses the counter circuit during each specified period
5 corresponding to the state of the count division signal, thus causing the counter circuit to count the number of accesses of each access type, after termination of the specified period, turns on indicator elements corresponding to the access type so that the lighting indicator elements represents the counted number of accesses and hold lighting state of the indicator element which represents most significant number of accesses and was
10 lighted just before the termination of the specified period, and makes all of the indicator elements corresponding to the access type turn off at a specified interval longer than the cycle of the count division signal.

13. (Previously Presented) The memory module indicator device according to claim 12,
15 wherein the indicator circuit comprises a releasing divider circuit which divides the clock signals and to generate a signal indicating a release state of a held indication corresponding to the maximum frequency of the access at a specified interval longer than the cycle of the count division signal,

wherein, when the signal indicating a release state is generated for the access
20 type, the indicator circuit makes all of the indicator elements corresponding to the access type turn off.

14. (Canceled)